

**REMARKS**

Responsive to the election of species requirement, applicant hereby provisionally elects the species I, including claims 21, 23, 25, 27, 29, and 30. Claims 20 and 36-38 should also be considered as they are generic, as also indicated in the Office Action. Further comments involving generic claims are present, dependent claims to the non-elected species should also be considered and allowed in the present application.

Responsive to the objection to the declaration as being defective, the following is noted. It is submitted that it is not defective since this city "Nüziders" in Austria is specifically set forth, the form referring to both the post office address and residence.

Responsive to the objection to the drawings, the following is noted.

With respect to claim 24, a new Fig. 3a has been included to schematically depict this arrangement which was described in the specification, which has been amended accordingly.

The objection regarding claims 21 and 32 should be obviated by the change in dependency of claim 32 to depend from claim 20.

Responsive to the objection to the use of the reference character 8, see the changes to the specification to clarify the language.

The Request for Permission to Change Drawings addresses the points raised at 6(C)(i) by adding numeral 8 to Fig. 1; 6(C)(ii) by correcting the reference character 32.1; and 6(d) by correcting the lead line for reference numeral 33.

The objection in 6(C)(iii) has been obviated by the correction in the specification of the reference numeral 22.

Responsive to the objection to the disclosure, each of the points raised has been addressed by corresponding amendments.

Responsive to the objection in paragraph 8 of the Office Action, the following is noted. It is submitted that the subject matter of claim 20, lines 5-9 is clearly described in the specification and that it is not required to add identical verbiage in the claims and the specification. However applicant would consider including corresponding languages in the claim in

response to any further request for same. Similar comments apply to the objection to claim 29, lines 6 and 7. As to the objection concerning claims 32-35, note the amendment to depend from claim 20. As to claim 32, line 5, note the amendment at page 12, picking up the language of original claim 13.

Claim 23 has been amended to delete the word "is" as requested.

Via the foregoing remarks and the enclosed request for permission to change the drawings, reconsideration and favorable action on all of the claims as submitted is in order and respectfully requested.

If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.


If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any deficiency in

Serial No. 09/600,593

fees or credit any overpayments to Deposit Account No. 05-1323  
(Docket #1959/49027).

Respectfully submitted,

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Serial No. 09/600,593

VERSION WITH MARKINGS TO SHOW CHANGES MADE TO THE  
SPECIFICATION

Page 2, amend the third full paragraph as follows:

The problem is solved according to the invention by providing a universal joint of the above-noted type with one of the following characterizing features; (i) the balls resiliently mounted in the socket; and (ii) an abutment arrangement for the ball and socket is arranged on the inner wall of the housing. Additional advantageous embodiments are described herein.

Page 4, second full paragraph amend as follows:

In universal joint systems especially of the kind mentioned above it is furthermore important that, when the joint is assembled, a guide means is present which brings the ball joint together in a selective manner, and furthermore that in extreme-end positions of the joint, which do not correspond to normal operations, a defined abutment is provided for safety reasons. By designing the junction housing accordingly in the internal area with corresponding [rotting] surrounding abutment surfaces this can be established. Care must be taken that especially the tumbler socket which in some cases bears the bushing will first engage the abutment in the extreme position and only then contact

the ball of the joint at a second abutment surface. This assures, especially in the uninstalled condition, that contact in the extreme position is cushioned. This kind of abutment definition is especially suitable for the present resilient ball joint bearing according to the invention, but it can also be used to advantage in other universal joints without resilient ball joint bearing.

Page 5, first full paragraph, amend as follows:

Other embodiments of cross joints are also suitable for universal joint systems. If, for example, especially great ease of movement and uniform motion are required, the double joint is advantageously made with a universal joint, also called a constant velocity joint, especially of the [Gleichlauf-Festgelenk] constant speed fixed link type. Between the two joints, which are joined together by a housing, the ball joint is again arranged with the resilient mounting, so that the shaft extremities are mounted for flexural movement through the two joints. Constant velocity joints are manufactured as "Löbro-Gelenke" by Löhr & Bromkamp GmbH, DE 6050 Offenbach.

Page 8, first full paragraph amend as follows:

A steering shaft double-cross universal joint according to the invention is represented in Figures 1 and 2. The joint

consists of a [coupling case 8 and a] tubular dual fork coupling case 8[, respectively,] in which two joint crosses 9 are respectively mounted for movement. The shaft ends [2 and 3] 1 and 2 are jointed on one another by means of the forks 4 and 6 which are journaled on the joint crosses 9, and to the socket 7 by the ball neck 10 and the balls 5. Bellows can protect the joint against dirt.

Page 8, third full paragraph amend as follows:

In Figure 2 there is shown in cross section a joint rotated 90 degrees, in which the forks 4 and 6 are represented at the shaft ends 1 and 2. The latter can be movably inserted, as mentioned, in the crosses 9 on the casing 8, which can be tubular, for example. In the central inner area of the [housing] casing the end abutments 13 and 14 are represented, which are in the form of annular raised portions and are helpful until the joint is assembled, and serve simultaneously as safety abutments in extreme terminal positions of the joint. The abutment surfaces 13 and 14 are configured such that the socket 7 when in the extreme position with respect to the ball 5 will first make movement-limiting contact with the abutment 13.

Page 9, third full paragraph amend as follows:

In Figure 3 is shown how the socket 7 can be held on the fork with bias as a tumbler socket 7 by springs 31. On account of the great bias force that is to be applied and the small amount of space available, plate springs are preferred. They furthermore are less expensive. Another appropriate spring mounting is possible by the use of rubber-elastic 31P (Figure 3a) pads which can be in annular form, for example, held between metal disks 31D. This can be done if necessary in a layered configuration.

Page 11, first full paragraph amend as follows:

Additional possibilities for the bearing are represented in Figure 4. In the upper half of the figure a rim 32.2 clutches the fork 6 on the side facing away from the ball of a projection 42. The springs 31 are held between the front side of the projection 42 and a rim of the bushing [22] 11 forming an annular chamber 34.

Page 12, second full paragraph amend as follows:

The guide 32 is preferably injection molded directly into the ball 5. The variant in Figures 9b and 9a shows in longitudinal and cross section an additional preferred possibility for a damping compensation of free play in the



unbiased state. The plastic sliding guide 37 is provided in its outer wall area with a plastic spring 39, which permits sliding without free play under bias V. The spring 39 is preferably made in one piece with the plastic guide 37, the spring being preferably slotted 40 so that it can breathe radially and being in contact with the inside surface of the tumbler guide 30 in a wear and tolerance equalizing manner. In Figure 10 the same plastic sliding guide as in Figure 9 is shown in the installed state. The tolerance gaps A, B, which the spring spans with respect to the tumbler guide 30, are shown schematically.

VERSION WITH MARKINGS TO SHOW CHANGES MADE TO THE CLAIMS

23. (Amended) Joint according to claim 21,  
wherein the resilient mounting includes [is] metal springs,  
preferably plate springs.

32. (Amended) Joint according to claim [21] 20,  
wherein a plastic sliding guide is provided between the  
socket and the ball such that it receives the ball for rotational  
movement and is carried for sliding movement in the axial  
direction by the socket, the guide being preferably injection-  
molded directly onto the ball.